Message

From: Strynar, Mark [Strynar.Mark@epa.gov]

Sent: 4/7/2020 11:32:15 AM

To: Risen, Amy J [amy.risen@ncdenr.gov]

Subject: Re: [External] Re: EPA 533

Amy,

On sheet 1 row 24 of the spreadsheet you attached you already had the one highlighted in pink yesterday. I was called PES/PFESA I think. Also just above it was the 1H substituted version called NVHOS.

Mark

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From: Risen, Amy J < Amy. Risen@ncdenr.gov>

Sent: Monday, April 6, 2020 4:30 PM

To: Strynar, Mark < Strynar. Mark@epa.gov>

Subject: RE: [External] Re: EPA 533

Thanks Mark!

I am also reviewing my current list of analytes and wonder if you can see if you have anything to add. I will also be reviewing the nomenclature, and happy to take any suggestions you might have.

Thanks, Amy

Amy Risen, PhD

Toxicologist, Division of Waste Management
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From: Strynar, Mark < Strynar. Mark@epa.gov>

Sent: Monday, April 6, 2020 1:29 PM **To:** Risen, Amy J <Amy.Risen@ncdenr.gov>

Subject: [External] Re: EPA 533

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Hi Amy,

My short answer would be I have no idea why the chemicals that were chosen for this method are the listed ones.

I see the liner versions of PMPA and PEPA (highlighted in yellow) were used. I expect as they could find standards for these analytes. Additionally I think this will evoke some confusion when linear versus branched versions are detected. I know Lam at Chemours has a new method coming out soon to distinguish the branched vs. linear.

For CAS 151772-58-6 (highlighted in blue) I have never detected this analyte in any Chemours sample to my recollection. This analyte that we called PFECA-B was purchased as a surrogate for a paper James McCord and I did when we could not get select standards for the PFECAs we were seeing near

Chemours. https://www.sciencedirect.com/science/article/abs/pii/S0021967318303625 [sciencedirect.com] This was an analyte selected as we could purchase it from Synquest at the time. I have no idea if it has ever been found in any sample.

Glad to chat if you want. See cell number below.

Mark

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From: Risen, Amy J < Amy. Risen@ncdenr.gov>

Sent: Monday, April 6, 2020 12:44 PM
To: Strynar, Mark < Strynar.Mark@epa.gov>

Subject: EPA 533

Hi Mark,

Hope you're well! I have a couple questions about the new EPA 533 method.

https://www.epa.gov/sites/production/files/2019-12/documents/method-533-815b19020.pdf [epa.gov]

EPA 533 has a some PFAS that have potential to be associated with the Chemours site. I realize some on the list may be associated with other sites too, but wanted to check on a few things:

- Do you know why the linear versions of the isomers where selected for the ones I've highlighted in yellow? As opposed to CASNs 13140-29-9 and 267239-61-2.
- I thought PFECA-B (see blue highlighting) was no longer thought to be present at this site and wondered if you knew why it was listed?
- There is another ether PFAS (see pink highlighting) that I am unfamiliar with, can you tell me if this is thought to be associated with the Chemours site?

Thanks 😊

| Analyte | Abbreviation | CASRN |
|---|--------------|-------------|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid | 9CI-PF3ONS | 756426-58-1 |
| 4,8-Dioxa-3H-perfluorononanoic acid | ADONA | 919005-14-4 |
| Hexafluoropropylene oxide dimer acid | HFPO-DA | 13252-13-6 |
| Nonafluoro-3,6-dioxaheptanoic acid | NFDHA | 151772-58-6 |
| Perfluorobutanoic acid | PFBA | 375-22-4 |
| Perfluorobutanesulfonic acid | PFBS | 375-73-5 |
| 1H,1H, 2H, 2H-Perfluorodecane sulfonic acid | 8:2FTS | 39108-34-4 |
| Perfluorodecanoic acid | PFDA | 335-76-2 |
| Perfluorododecanoic acid | PFDoA | 307-55-1 |
| Perfluoro(2-ethoxyethane)sulfonic acid | PFEESA | 113507-82-7 |
| Perfluoroheptanesulfonic acid | PFHpS | 375-92-8 |
| Perfluoroheptanoic acid | PFHpA | 375-85-9 |
| 1H,1H, 2H, 2H-Perfluorohexane sulfonic acid | 4:2FTS | 757124-72-4 |
| Perfluorohexanesulfonic acid | PFHxS | 355-46-4 |
| Perfluorohexanoic acid | PFHxA | 307-24-4 |
| Perfluoro-3-methoxypropanoic acid | PFMPA | 377-73-1 |
| Perfluoro-4-methoxybutanoic acid | PFMBA | 863090-89-5 |
| Perfluorononanoic acid | PFNA | 375-95-1 |
| 1H,1H, 2H, 2H-Perfluorooctane sulfonic acid | 6:2FTS | 27619-97-2 |
| Perfluorooctanesulfonic acid | PFOS | 1763-23-1 |
| Perfluorooctanoic acid | PFOA | 335-67-1 |
| Perfluoropentanoic acid | PFPeA | 2706-90-3 |
| Perfluoropentanesulfonic acid | PFPeS | 2706-91-4 |
| Perfluoroundecanoic acid | PFUnA | 2058-94-8 |

Amy

Amy Risen, PhD Toxicologist, Division of Waste Management North Carolina Department of Environmental Quality Ex. 6 Personal Privacy (PP) Mobile) **please use mobile phone until further notice

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